Chemical Analysis Report

CEN-DIST-2021-08-11-05

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Little Wekiva (west)**
Request ID: **RQ-2021-05-17-14**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 07-SEP-2021 13:26

B. Steinbock

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Little Wekiva (West) @ 50m US of Northwest Ave. **Collection Date/Time: 08/10/2021 10:27**

Field ID: G2CE0099 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2268651	EPA 8321B	Aldicarb	0.020	U	ug/L	P402170	
		Aldicarb Sulfone	0.0020	U	ug/L	P402170	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P402170	
		Carbaryl	0.0020	U	ug/L	P402170	
		Carbofuran	0.0020	U	ug/L	P402170	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P402170	
		Methiocarb	0.0020	U	ug/L	P402170	
		Methomyl	0.0020	U	ug/L	P402170	
		Oxamyl	0.0020	U	ug/L	P402170	
		Propoxur	0.0020	U	ug/L	P402170	
2268652		2,4-D	0.81		ug/L	P402303	
		Acesulfame K	0.19	I	ug/L	P402297	
		2,4,5-T	0.0040	U	ug/L	P402303	
		AMPA	0.31	I	ug/L	P402297	
		Acetaminophen	0.0083	I	ug/L	P402303	
		Acetamiprid	0.0020	U	ug/L	P402303	
		Endothall	0.25	U	ug/L	P402297	
		Glufosinate	0.10	U	ug/L	P402297	
		Glyphosate	2.0		ug/L	P402297	
		Afidopyropen	0.0020	U	ug/L	P402303	
		Bentazon	0.053		ug/L	P402303	
		Sucralose	0.57		ug/L	P402297	
		Benzovindiflupyr	0.0020	U	ug/L	P402303	
		Carbamazepine	0.0013	I	ug/L	P402303	
		Clothianidin	0.0020	U	ug/L	P402303	
		Dinotefuran	0.0020	U	ug/L	P402303	
		Diuron	0.022		ug/L	P402303	
		Fenuron	0.016	U	ug/L	P402303	
		Fluridone	0.067		ug/L	P402303	
		Imazapyr	0.21		ug/L	P402303	
		Hydrocodone	0.0020	U	ug/L	P402303	
		Ibuprofen	0.020	U	ug/L	P402303	
		Imidacloprid	0.011		ug/L	P402303	
		Linuron	0.0040	U	ug/L	P402303	
		Mandestrobin	0.0020	U	ug/L	P402303	
		MCPP	0.0034	I	ug/L	P402303	
		Naproxen	0.0080	U	ug/L	P402303	
		Primidone	0.0040	U	ug/L	P402303	
		Pyraclostrobin	0.0020	U	ug/L	P402303	
		Thiamethoxam	0.0020	U	ug/L	P402303	
		Tolfenpyrad	0.0020	U	ug/L	P402303	
		Triclopyr	0.0040	U	ug/L	P402303	
2268653	EPA 8270E	Aldrin	0.67	U	ng/L	P402487	

Field ID: G2CE0099 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2268653	EPA 8270E	Alpha-BHC	0.10	U	ng/L	P402487	
		Alpha-Chlordane	0.20	U	ng/L	P402487	
		Beta-BHC	0.10	U	ng/L	P402487	
		Beta-Cyfluthrin**	1.3	U	ng/L	P402487	
		Bifenthrin**	0.51	U	ng/L	P402487	
		Chlorothalonil	0.51	U	ng/L	P402487	
		Cis-Nonachlor**	0.20	U	ng/L	P402487	
		Cypermethrin	1.5	U	ng/L	P402487	
		Dacthal**	0.15	U	ng/L	P402487	
		DDD-p,p'	0.26	U	ng/L	P402487	
		DDE-p,p'	0.20	U	ng/L	P402487	
		DDT-p,p'	0.26	U	ng/L	P402487	
		Delta-BHC	0.41	U	ng/L	P402487	
		Deltamethrin**	1.3	U	ng/L	P402487	
		Dichlobenil**	0.10	U	ng/L	P402487	
		Dicofol	1.3	U	ng/L	P402487	
		Dieldrin	0.41	U	ng/L	P402487	
		Endosulfan I	0.41	U	ng/L	P402487	
		Endosulfan II	0.41	U	ng/L	P402487	
		Endosulfan Sulfate	0.31	U	ng/L	P402487	
		Endrin	0.41	UJ	ng/L	P402487	LCS, MS, RPD
		Endrin Aldehyde	0.77	UJ	ng/L	P402487	LCS, MS, RPD
		Endrin Ketone	0.41	U	ng/L	P402487	
		Esfenvalerate**	0.77	U	ng/L	P402487	
		Ethalfluralin**	0.15	U	ng/L	P402487	
		Fenpropathrin**	0.26	UJ	ng/L	P402487	LCS
		Gamma-BHC	0.13	U	ng/L	P402487	
		Gamma-Chlordane	0.20	U	ng/L	P402487	
		Heptachlor	0.20	U	ng/L	P402487	
		Heptachlor Epoxide	0.26	U	ng/L	P402487	
		Hexachlorobenzene	1.0	U	ng/L	P402487	
		Kepone**	5.1	U	ng/L	P402487	
		Lambda-Cyhalothrin**	0.77	U	ng/L	P402487	
		Methoxychlor	0.31	U	ng/L	P402487	
		MGK-264**	0.20	U	ng/L	P402487	
		Mirex	0.72	U	ng/L	P402487	
		Permethrin	1.6	U	ng/L	P402487	
		Phenothrin**	0.92	UJ	ng/L	P402487	CCV
		Piperonyl Butoxide**	0.21	I J	ng/L	P402487	LCS, MS, RPD
		Prallethrin**	2.0	U	ng/L	P402487	
		Tau-Fluvalinate**	0.26	U	ng/L	P402487	
		Tetramethrin**	0.77	UJ	ng/L	P402487	LCS
		Trans-Nonachlor**	0.20	U	ng/L	P402487	
		Triclosan Methyl**	0.15	U	ng/L	P402487	

Field ID: G2CE0099 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2268653	EPA 8270E	Trifluralin	0.20	U	ng/L	P402487	
	EPA 8276	Chlordane	5.1	UJ	ng/L	P402487	SUR
		Toxaphene	31	UJ	ng/L	P402487	SUR
2268654	EPA 8270E	Acetochlor	0.24	U	ng/L	P402306	
		Alachlor	0.24	U	ng/L	P402306	
		Ametryn	0.57	U	ng/L	P402306	
		Atrazine	28		ng/L	P402306	
		Atrazine Desethyl	6.0		ng/L	P402306	
		Azinphos Methyl	1.9	U	ng/L	P402306	
		Azoxystrobin**	0.77	I	ng/L	P402306	
		Bromacil	0.48	U	ng/L	P402306	
		Butylate	0.38	U	ng/L	P402306	
		Caffeine**	31		ng/L	P402306	
		Carbophenothion	0.48	U	ng/L	P402306	
		Carfentrazone Ethyl**	0.095	U	ng/L	P402306	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P402306	
		Chlorpyrifos Methyl	0.048	U	ng/L	P402306	
		Cyanazine	3.1	U	ng/L	P402306	
		Demeton	1.4	UJ	ng/L	P402306	CCV
		Diazinon	0.12	U	ng/L	P402306	
		Difenoconazole**	0.57	U	ng/L	P402306	
		Dimethenamid**	0.095	U	ng/L	P402306	
		Disulfoton	0.48	U	ng/L	P402306	
		Dithiopyr**	0.17	U	ng/L	P402306	
		EPTC	1.2	U	ng/L	P402306	
		Ethion	0.14	U	ng/L	P402306	RPD
		Ethoprop	0.095	U	ng/L	P402306	
		Fenamiphos	0.48	U	ng/L	P402306	
		Fenbuconazole**	0.13	I	ng/L	P402306	
		Fipronil	0.99		ng/L	P402306	
		Fipronil Desulfinyl**	1.8		ng/L	P402306	
		Fipronil Sulfide	1.4		ng/L	P402306	
		Fipronil Sulfone	1.6		ng/L	P402306	
		Fluazifop-P-butyl**	0.095	U	ng/L	P402306	
		Fludioxonil**	0.12	U	ng/L	P402306	
		Flumioxazin**	10		ng/L	P402306	
		Flutolanil**	0.095	U	ng/L	P402306	
		Fluxapyroxad**	0.11	I	ng/L	P402306	
		Fonofos	0.19	U	ng/L	P402306	
		Hexazinone	0.67	I	ng/L	P402306	
		Imazalil**	0.71	U	ng/L	P402306	
		Iprodione**	0.57	U	ng/L	P402306	
		Malathion	0.33	U	ng/L	P402306	
		Metalaxyl	0.71	U	ng/L	P402306	
		Metolachlor	0.33	U	ng/L	P402306	

Field ID: G2CE0099 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2268654	EPA 8270E	Metribuzin	3.1	U	ng/L	P402306	
		Mevinphos	1.0	U	ng/L	P402306	
		Molinate	0.29	U	ng/L	P402306	
		Myclobutanil**	0.74	I	ng/L	P402306	
		Naled**	1.4	U	ng/L	P402306	
		Norflurazon	0.48	U	ng/L	P402306	
		Oxadiazon	0.83	I	ng/L	P402306	
		Oxyfluorfen**	0.14	U	ng/L	P402306	
		Parathion Ethyl	0.24	U	ng/L	P402306	
		Parathion Methyl	0.52	U	ng/L	P402306	
		Pendimethalin	0.95	U	ng/L	P402306	
		Phorate	0.50	U	ng/L	P402306	
		Prodiamine**	0.17	U	ng/L	P402306	
		Prometon	1.7	I	ng/L	P402306	
		Prometryn	0.19	U	ng/L	P402306	
		Pronamide**	0.14	U	ng/L	P402306	
		Propiconazole**	2.1		ng/L	P402306	
		Pyriproxyfen**	0.12	U	ng/L	P402306	
		Simazine	1.8	I	ng/L	P402306	
		Sulfentrazone**	2.6		ng/L	P402306	
		Tebuconazole**	2.1		ng/L	P402306	
		Terbufos	0.095	U	ng/L	P402306	
		Terbuthylazine	0.40	U	ng/L	P402306	

Ref. Method and Comment:
EPA 8270E: LFB precision for piperonyl butoxide not assessed due to low recoveries. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8276: Reported results are J qualified due to the surrogate recovery exceeding control limits; the sample was subsequently re-analyzed (after expiration) with acceptable surrogate recovery and the same analytical results were obtained. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for Atrazine and Caffeine not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P402306

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P402306

Component	Result	Code	Units
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P402306

Component	Result	Code	Units
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P402487

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P402487

Component	Result	Code	Units
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P402487

Component	Result	Code	Units
Mirex	0.70	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P402487

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P402170

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P402297

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P402297

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P402303

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	100	102	P/P	70 - 121
Alachlor	93.0	94.1	P/P	70 - 119
Ametryn	102	102	P/P	61 - 135
Atrazine	95.2	96.2	P/P	76 - 123
Atrazine Desethyl	89.2	93.8	P/P	35 - 140
Azinphos Methyl	131	129	P/P	57 - 163
Azoxystrobin	98.2	106	P/P	43 - 231
Bromacil	87.0	90.0	P/P	42 - 123
Butylate	42.9	44.3	P/P	34 - 92.0
Caffeine	70.3	71.4	P/P	70 - 130
Carbophenothion	105	103	P/P	61 - 121
Carfentrazone Ethyl	117	117	P/P	62 - 139
Chlorpyrifos Ethyl	88.8	87.5	P/P	67 - 121
Chlorpyrifos Methyl	96.3	93.9	P/P	67 - 120
Cyanazine	135	141	P/P	20 - 226
Demeton	48.5	46.2	P/P	35 - 125
Diazinon	97.6	95.9	P/P	70 - 122
Difenoconazole	183	184	P/P	56 - 186
Dimethenamid	79.7	80.8	P/P	67 - 119
Disulfoton	91.1	94.0	P/P	47 - 120
Dithiopyr	90.6	94.2	P/P	67 - 118
EPTC	44.9	45.4	P/P	33 - 90.0
Ethion	76.9	74.7	P/P	40 - 133
Ethoprop	87.4	87.0	P/P	61 - 121
Fenamiphos	94.1	97.9	P/P	31 - 139
Fenbuconazole	115	119	P/P	66 - 141
Fipronil	106	107	P/P	62 - 129
Fipronil Desulfinyl	106	117	P/P	59 - 126
Fipronil Sulfide	87.8	90.6	P/P	63 - 117
Fipronil Sulfone	81.2	78.3	P/P	57 - 117
Fluazifop-P-butyl	105	104	P/P	63 - 124
Fludioxonil	121	121	P/P	63 - 123
Flumioxazin	189	191	P/P	34 - 245
Flutolanil	93.1	91.4	P/P	56 - 131
Fluxapyroxad	94.1	95.2	P/P	57 - 117
Fonofos	86.6	84.8	P/P	61 - 116
Hexazinone	96.1	100	P/P	55 - 138
Imazalil	93.7	96.7	P/P	33 - 143
Iprodione	109	102	P/P	59 - 118
Malathion	93.3	91.0	P/P	62 - 138
Metalaxyl	92.8	95.7	P/P	24 - 147
Metolachlor	89.6	90.4	P/P	68 - 118
Metribuzin	90.6	92.6	P/P	20 - 239
Mevinphos	75.7	84.4	P/P	46 - 124
Molinate	46.8	50.0	P/P	46 - 100
Myclobutanil	92.2	95.7	P/P	32 - 149
Naled	47.7	46.8	P/P	32 - 95.0
Norflurazon	110	112	P/P	57 - 127
Oxadiazon	82.0	83.9	P/P	63 - 118
Oxyfluorfen	102	97.1	P/P	69 - 137
Parathion Ethyl	87.9	93.1	P/P	70 - 113
Parathion Methyl	112	110	P/P	71 - 130

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pendimethalin	65.2	66.7	P/P	55 - 118
Phorate	74.0	67.8	P/P	46 - 125
Prodiamine	28.8	25.6	P/P	20 - 141
Prometon	87.6	91.4	P/P	54 - 122
Prometryn	95.4	95.7	P/P	66 - 124
Pronamide	93.4	91.5	P/P	79 - 122
Propiconazole	94.6	97.8	P/P	61 - 126
Pyriproxyfen	89.2	91.8	P/P	52 - 131
Simazine	98.1	103	P/P	75 - 128
Sulfentrazone	100	97.6	P/P	20 - 132
Tebuconazole	77.6	76.9	P/P	20 - 116
Terbufos	93.7	95.4	P/P	61 - 117
Terbuthylazine	83.0	89.0	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P402487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	61.7	60.6	P/P	20 - 150
Alpha-BHC	99.6	96.4	P/P	50 - 150
Alpha-Chlordane	98.0	91.9	P/P	50 - 150
Beta-BHC	138	128	P/P	50 - 150
Beta-Cyfluthrin	76.4	78.3	P/P	50 - 150
Bifenthrin	68.3	66.4	P/P	40 - 150
Chlorothalonil	82.5	82.6	P/P	20 - 150
Cis-Nonachlor	75.4	77.5	P/P	50 - 150
Cypermethrin	77.6	77.7	P/P	50 - 150
Dacthal	105	101	P/P	50 - 150
DDD-p,p'	83.5	83.7	P/P	50 - 150
DDE-p,p'	96.1	93.1	P/P	50 - 150
DDT-p,p'	89.3	87.6	P/P	50 - 150
Delta-BHC	138	134	P/P	50 - 150
Deltamethrin	91.0	94.7	P/P	50 - 150
Dichlobenil	72.8	70.7	P/P	40 - 150
Dicofol	79.7	78.5	P/P	50 - 150
Dieldrin	73.6	75.4	P/P	50 - 150
Endosulfan I	93.6	90.4	P/P	50 - 150
Endosulfan II	77.0	76.8	P/P	50 - 150
Endosulfan Sulfate	90.5	88.1	P/P	50 - 150
Endrin	14.9	14.9	F/F	50 - 150
Endrin Aldehyde	41.1	41.0	F/F	50 - 150
Endrin Ketone	149	149	P/P	50 - 150
Esfenvalerate	76.3	78.9	P/P	50 - 180
Ethalfluralin	60.0	63.3	P/P	50 - 150
Fenpropathrin	44.2	44.3	F/F	50 - 150
Gamma-BHC	109	106	P/P	50 - 150
Gamma-Chlordane	88.4	86.6	P/P	50 - 150
Heptachlor	72.9	72.1	P/P	50 - 150
Heptachlor Epoxide	92.2	89.6	P/P	50 - 150
Hexachlorobenzene	85.9	87.3	P/P	50 - 150
Kepone	87.5	96.3	P/P	30 - 180
Lambda-Cyhalothrin	68.7	77.7	P/P	50 - 200

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoxychlor	83.9	83.6	P/P	50 - 150
MGK-264	96.8	98.5	P/P	30 - 150
Mirex	63.4	62.0	P/P	50 - 180
Permethrin	78.7	79.5	P/P	50 - 150
Phenothrin	68.3	52.8	P/P	20 - 150
Piperonyl Butoxide	0.462	0.238	F/F	50 - 150
Prallethrin	49.7	48.4	P/P	30 - 150
Tau-Fluvalinate	67.7	70.3	P/P	40 - 150
Tetramethrin	26.3	22.9	F/F	30 - 150
Trans-Nonachlor	88.1	87.7	P/P	50 - 150
Triclosan Methyl	99.0	95.2	P/P	50 - 150
Trifluralin	82.0	85.2	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P402487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.1	108	P/P	56 - 117
Toxaphene	97.9	95.2	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P402170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	87.4		P	40 - 150
Aldicarb	62.8		P	30 - 150
Aldicarb Sulfone	90.8		P	40 - 150
Aldicarb Sulfoxide	107		P	40 - 150
Carbaryl	80.5		P	40 - 150
Carbofuran	81.6		P	40 - 150
Methiocarb	73.0		P	40 - 150
Methomyl	87.6		P	40 - 150
Oxamyl	87.6		P	40 - 150
Propoxur	82.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402297

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	88.6		P	40 - 150
Endothall	87.2		P	40 - 150
Glufosinate	92.7		P	40 - 150
Glyphosate	98.0		P	40 - 150
Sucralose	99.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402303

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	135		P	40 - 150
2,4,5-T	111		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P402303

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	100		P	30 - 150
Acetamiprid	93.7		P	40 - 150
Afidopyropen	75.0		P	40 - 150
Bentazon	113		P	30 - 150
Benzovindiflupyr	94.7		P	40 - 150
Carbamazepine	103		P	40 - 150
Clothianidin	107		P	40 - 150
Dinotefuran	104		P	40 - 150
Diuron	94.0		P	40 - 150
Fenuron	104		P	40 - 150
Fluridone	95.3		P	40 - 150
Hydrocodone	98.6		P	40 - 150
Ibuprofen	84.8		P	40 - 150
Imazapyr	108		P	40 - 150
Imidacloprid	100		P	40 - 150
Linuron	83.4		P	40 - 150
Mandestrobin	100		P	40 - 150
MCPP	117		P	40 - 150
Naproxen	89.9		P	40 - 150
Primidone	103		P	40 - 150
Pyraclostrobin	92.6		P	40 - 150
Thiamethoxam	105		P	40 - 150
Tolfenpyrad	60.2		P	30 - 150
Triclopyr	114		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268339	Acetochlor	92.2	102	P/P	66 - 122
2268339	Alachlor	83.8	96.5	P/P	65 - 122
2268339	Ametryn	75.4	87.2	P/P	45 - 173
2268339	Atrazine Desethyl	54.8	64.8	P/P	25 - 150
2268339	Azinphos Methyl	120	142	P/P	44 - 174
2268339	Azoxystrobin	108	98.8	P/P	10 - 268
2268339	Bromacil	84.2	95.7	P/P	31 - 145
2268339	Butylate	45.5	38.6	P/P	15 - 97.0
2268339	Carbophenothion	91.0	101	P/P	42 - 129
2268339	Carfentrazone Ethyl	106	89.0	P/P	62 - 145
2268339	Chlorpyrifos Ethyl	74.7	82.5	P/P	60 - 124
2268339	Chlorpyrifos Methyl	90.1	101	P/P	66 - 119
2268339	Cyanazine	138	162	P/P	17 - 225
2268339	Demeton	113	115	P/P	36 - 142
2268339	Diazinon	96.4	115	P/P	70 - 128
2268339	Difenoconazole	177	215	P/P	33 - 222
2268339	Dimethenamid	69.9	83.0	P/P	54 - 125
2268339	Disulfoton	89.8	99.4	P/P	49 - 133
2268339	Dithiopyr	78.7	83.8	P/P	55 - 123
2268339	EPTC	47.7	36.9	P/P	19 - 91.0
2268339	Ethion	57.3	82.5	P/P	13 - 143
2268339	Ethoprop	110	113	P/P	49 - 144
2268339	Fenamiphos	87.5	76.4	P/P	32 - 136
2268339	Fenbuconazole	121	128	P/P	73 - 148
2268339	Fipronil	104	111	P/P	57 - 129
2268339	Fipronil Desulfinyl	97.4	116	P/P	49 - 127
2268339	Fipronil Sulfide	89.5	101	P/P	44 - 127
2268339	Fipronil Sulfone	71.6	87.0	P/P	35 - 126
2268339	Fluazifop-P-butyl	96.7	114	P/P	67 - 129
2268339	Fludioxonil	104	125	P/P	61 - 126
2268339	Flumioxazin	182	235	P/P	38 - 279
2268339	Flutolanil	74.7	93.1	P/P	55 - 136
2268339	Fluxapyroxad	80.6	95.4	P/P	33 - 140
2268339	Fonofos	91.3	105	P/P	58 - 125
2268339	Hexazinone	92.0	106	P/P	57 - 148
2268339	Imazalil	77.7	84.3	P/P	10 - 221
2268339	Iprodione	110	123	P/P	32 - 140
2268339	Malathion	88.2	99.8	P/P	52 - 138
2268339	Metalaxyl	84.0	96.8	P/P	46 - 134
2268339	Metolachlor	82.4	96.5	P/P	58 - 122
2268339	Metribuzin	102	105	P/P	16 - 272
2268339	Mevinphos	105	111	P/P	45 - 140
2268339	Molinate	57.7	56.2	P/P	41 - 103
2268339	Myclobutanil	82.5	98.4	P/P	60 - 134
2268339	Naled	49.1	53.8	P/P	20 - 113
2268339	Norflurazon	97.7	112	P/P	51 - 123
2268339	Oxadiazon	76.2	85.7	P/P	44 - 125
2268339	Oxyfluorfen	104	123	P/P	66 - 176
2268339	Parathion Ethyl	90.9	105	P/P	57 - 132
2268339	Parathion Methyl	117	125	P/P	59 - 156
2268339	Pendimethalin	81.9	87.8	P/P	59 - 129
2268339	Phorate	87.3	84.8	P/P	47 - 136

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268339	Prodiamine	47.3	52.3	P/P	10 - 159
2268339	Prometon	82.8	108	P/P	59 - 127
2268339	Prometryn	67.9	72.5	P/P	59 - 129
2268339	Pronamide	81.9	95.0	P/P	65 - 145
2268339	Propiconazole	82.7	86.5	P/P	28 - 165
2268339	Pyriproxyfen	69.7	83.7	P/P	21 - 180
2268339	Simazine	101	110	P/P	63 - 147
2268339	Sulfentrazone	85.0	102	P/P	32 - 136
2268339	Tebuconazole	50.0	73.7	P/P	10 - 117
2268339	Terbufos	109	119	P/P	61 - 131
2268339	Terbuthylazine	87.1	99.2	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P402487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268653	Aldrin	64.9	62.8	P/P	20 - 170
2268653	Alpha-BHC	91.3	90.2	P/P	50 - 170
2268653	Alpha-Chlordane	91.0	87.1	P/P	50 - 170
2268653	Beta-BHC	109	110	P/P	50 - 170
2268653	Beta-Cyfluthrin	135	120	P/P	50 - 170
2268653	Bifenthrin	99.7	92.0	P/P	40 - 170
2268653	Chlorothalonil	130	132	P/P	20 - 170
2268653	Cis-Nonachlor	83.2	74.2	P/P	50 - 170
2268653	Cypermethrin	120	109	P/P	50 - 170
2268653	Dacthal	91.3	89.3	P/P	50 - 170
2268653	DDD-p,p'	91.5	84.4	P/P	50 - 170
2268653	DDE-p,p'	84.3	81.2	P/P	50 - 170
2268653	DDT-p,p'	80.6	76.3	P/P	50 - 170
2268653	Delta-BHC	106	105	P/P	50 - 170
2268653	Deltamethrin	149	128	P/P	50 - 170
2268653	Dichlobenil	70.6	76.6	P/P	40 - 170
2268653	Dicofol	88.5	85.0	P/P	50 - 170
2268653	Dieldrin	95.1	82.9	P/P	50 - 170
2268653	Endosulfan I	84.9	82.1	P/P	50 - 170
2268653	Endosulfan II	91.9	83.3	P/P	50 - 170
2268653	Endosulfan Sulfate	90.7	81.5	P/P	50 - 170
2268653	Endrin	67.1	35.1	P/F	50 - 170
2268653	Endrin Aldehyde	51.4	35.8	P/F	50 - 170
2268653	Endrin Ketone	106	117	P/P	50 - 170
2268653	Esfenvalerate	132	122	P/P	50 - 180
2268653	Ethalfluralin	81.8	79.2	P/P	50 - 170
2268653	Fenpropathrin	86.9	81.4	P/P	50 - 170
2268653	Gamma-BHC	97.4	98.1	P/P	50 - 170
2268653	Gamma-Chlordane	86.0	81.5	P/P	50 - 170
2268653	Heptachlor	76.9	72.7	P/P	50 - 170
2268653	Heptachlor Epoxide	86.0	81.2	P/P	50 - 170
2268653	Hexachlorobenzene	78.3	76.2	P/P	50 - 170
2268653	Kepone	122	103	P/P	30 - 180
2268653	Lambda-Cyhalothrin	114	106	P/P	50 - 200
2268653	Methoxychlor	89.3	84.3	P/P	50 - 170
2268653	MGK-264	101	96.4	P/P	30 - 170

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268653	Mirex	72.3	70.6	P/P	50 - 180
2268653	Permethrin	118	114	P/P	50 - 170
2268653	Phenothrin	91.5	111	P/P	20 - 170
2268653	Piperonyl Butoxide	79.9	15.8	P/F	50 - 170
2268653	Prallethrin	99.6	90.0	P/P	30 - 170
2268653	Tau-Fluvalinate	114	105	P/P	40 - 170
2268653	Tetramethrin	103	89.0	P/P	30 - 170
2268653	Trans-Nonachlor	81.1	79.7	P/P	50 - 170
2268653	Triclosan Methyl	83.3	80.0	P/P	50 - 170
2268653	Trifluralin	79.0	78.2	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P402487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268402	Chlordane	91.9	90.8	P/P	47 - 128
2268402	Toxaphene	91.9	86.2	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P402170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2267464	3-Hydroxycarbofuran	72.2	90.9	P/P	40 - 150
2267464	Aldicarb	78.8	79.6	P/P	30 - 150
2267464	Aldicarb Sulfone	110	104	P/P	40 - 150
2267464	Aldicarb Sulfoxide	54.7	47.0	P/P	40 - 150
2267464	Carbaryl	76.8	76.3	P/P	40 - 150
2267464	Carbofuran	78.1	79.8	P/P	40 - 150
2267464	Methiocarb	74.9	73.7	P/P	40 - 150
2267464	Methomyl	85.7	81.0	P/P	40 - 150
2267464	Oxamyl	95.2	88.9	P/P	40 - 150
2267464	Propoxur	84.0	82.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268337	Acesulfame K	123	133	P/P	40 - 150
2268337	AMPA	76.0	77.6	P/P	40 - 150
2268337	Endothall	105	106	P/P	40 - 150
2268337	Glufosinate	80.0	77.7	P/P	40 - 150
2268337	Glyphosate	82.0	77.0	P/P	40 - 150
2268337	Sucralose	102	102	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402303

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268133	2,4-D	114	104	P/P	40 - 150
2268133	2,4,5-T	99.4	107	P/P	40 - 150
2268133	Acetaminophen	88.2	82.1	P/P	30 - 150
2268133	Acetamiprid	81.9	68.5	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P402303

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268133	Afidopyropen	63.4	55.2	P/P	40 - 150
2268133	Bentazon	91.2	94.7	P/P	30 - 150
2268133	Benzovindiflupyr	86.6	87.0	P/P	40 - 150
2268133	Carbamazepine	89.0	91.5	P/P	40 - 150
2268133	Clothianidin	98.6	93.2	P/P	40 - 150
2268133	Dinotefuran	94.9	91.2	P/P	40 - 150
2268133	Diuron	81.0	84.9	P/P	40 - 150
2268133	Fenuron	92.9	86.6	P/P	40 - 150
2268133	Fluridone	84.9	91.7	P/P	40 - 150
2268133	Hydrocodone	86.0	89.8	P/P	40 - 150
2268133	Ibuprofen	77.5	82.1	P/P	40 - 150
2268133	Imazapyr	104	99.5	P/P	40 - 150
2268133	Imidacloprid	99.4	97.8	P/P	40 - 150
2268133	Linuron	75.9	80.5	P/P	40 - 150
2268133	Mandestrobin	87.2	82.5	P/P	40 - 150
2268133	MCPP	110	117	P/P	40 - 150
2268133	Naproxen	84.1	85.6	P/P	40 - 150
2268133	Primidone	89.5	93.5	P/P	40 - 150
2268133	Pyraclostrobin	83.6	82.3	P/P	40 - 150
2268133	Thiamethoxam	99.6	95.0	P/P	40 - 150
2268133	Tolfenpyrad	54.7	57.3	P/P	30 - 150
2268133	Triclopyr	101	106	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268339	Acetochlor	9.98	Spike	P	0 - 30
2268339	Alachlor	14.0	Spike	P	0 - 30
2268339	Ametryn	10.6	Spike	P	0 - 30
2268339	Atrazine	7.25	Spike	P	0 - 30
2268339	Atrazine Desethyl	16.8	Spike	P	0 - 30
2268339	Azinphos Methyl	16.8	Spike	P	0 - 30
2268339	Azoxystrobin	7.70	Spike	P	0 - 30
2268339	Bromacil	11.9	Spike	P	0 - 30
2268339	Butylate	16.2	Spike	P	0 - 30
2268339	Caffeine	0.0433	Spike	P	0 - 30
2268339	Carbophenothion	10.3	Spike	P	0 - 30
2268339	Carfentrazone Ethyl	17.9	Spike	P	0 - 30
2268339	Chlorpyrifos Ethyl	9.91	Spike	P	0 - 30
2268339	Chlorpyrifos Methyl	11.6	Spike	P	0 - 30
2268339	Cyanazine	15.5	Spike	P	0 - 30
2268339	Demeton	2.03	Spike	P	0 - 30
2268339	Diazinon	17.7	Spike	P	0 - 30
2268339	Difenoconazole	19.7	Spike	P	0 - 30
2268339	Dimethenamid	17.2	Spike	P	0 - 30
2268339	Disulfoton	10.1	Spike	P	0 - 30
2268339	Dithiopyr	6.34	Spike	P	0 - 30
2268339	EPTC	25.6	Spike	P	0 - 30
2268339	Ethion	36.1	Spike	F	0 - 30
2268339	Ethoprop	3.09	Spike	P	0 - 30
2268339	Fenamiphos	13.5	Spike	P	0 - 30
2268339	Fenbuconazole	6.22	Spike	P	0 - 30
2268339	Fipronil	6.86	Spike	P	0 - 30
2268339	Fipronil Desulfinyl	16.2	Spike	P	0 - 30
2268339	Fipronil Sulfide	10.2	Spike	P	0 - 30
2268339	Fipronil Sulfone	14.8	Spike	P	0 - 30
2268339	Fluazifop-P-butyl	16.7	Spike	P	0 - 30
2268339	Fludioxonil	18.5	Spike	P	0 - 30
2268339	Flumioxazin	25.0	Spike	P	0 - 30
2268339	Flutolanil	21.9	Spike	P	0 - 30
2268339	Fluxapyroxad	16.8	Spike	P	0 - 30
2268339	Fonofos	13.7	Spike	P	0 - 30
2268339	Hexazinone	8.66	Spike	P	0 - 30
2268339	Imazalil	6.59	Spike	P	0 - 30
2268339	Iprodione	11.7	Spike	P	0 - 30
2268339	Malathion	12.4	Spike	P	0 - 30
2268339	Metalaxyl	14.1	Spike	P	0 - 30
2268339	Metolachlor	14.4	Spike	P	0 - 30
2268339	Metribuzin	3.35	Spike	P	0 - 30
2268339	Mevinphos	5.06	Spike	P	0 - 30
2268339	Molinate	2.53	Spike	P	0 - 30
2268339	Myclobutanil	15.9	Spike	P	0 - 30
2268339	Naled	9.03	Spike	P	0 - 30
2268339	Norflurazon	13.3	Spike	P	0 - 30
2268339	Oxadiazon	11.7	Spike	P	0 - 30
2268339	Oxyfluorfen	16.4	Spike	P	0 - 30
2268339	Parathion Ethyl	14.4	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268339	Parathion Methyl	6.41	Spike	P	0 - 30
2268339	Pendimethalin	6.97	Spike	P	0 - 30
2268339	Phorate	2.96	Spike	P	0 - 30
2268339	Prodiamine	10.1	Spike	P	0 - 30
2268339	Prometon	26.5	Spike	P	0 - 30
2268339	Prometryn	6.51	Spike	P	0 - 30
2268339	Pronamide	14.9	Spike	P	0 - 30
2268339	Propiconazole	2.96	Spike	P	0 - 30
2268339	Pyriproxyfen	18.2	Spike	P	0 - 30
2268339	Simazine	9.23	Spike	P	0 - 30
2268339	Sulfentrazone	14.0	Spike	P	0 - 30
2268339	Tebuconazole	28.7	Spike	P	0 - 30
2268339	Terbufos	8.60	Spike	P	0 - 30
2268339	Terbuthylazine	13.0	Spike	P	0 - 30
LFB	Acetochlor	1.12	LCS	P	0 - 30
LFB	Alachlor	1.19	LCS	P	0 - 30
LFB	Ametryn	0.471	LCS	P	0 - 30
LFB	Atrazine	1.03	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.98	LCS	P	0 - 30
LFB	Azinphos Methyl	1.84	LCS	P	0 - 30
LFB	Azoxystrobin	7.60	LCS	P	0 - 30
LFB	Bromacil	3.45	LCS	P	0 - 30
LFB	Butylate	3.22	LCS	P	0 - 30
LFB	Caffeine	1.57	LCS	P	0 - 30
LFB	Carbophenothion	1.86	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	0.223	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.54	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.43	LCS	P	0 - 30
LFB	Cyanazine	4.14	LCS	P	0 - 30
LFB	Demeton	4.83	LCS	P	0 - 30
LFB	Diazinon	1.84	LCS	P	0 - 30
LFB	Difenoconazole	0.655	LCS	P	0 - 30
LFB	Dimethenamid	1.46	LCS	P	0 - 30
LFB	Disulfoton	3.09	LCS	P	0 - 30
LFB	Dithiopyr	3.92	LCS	P	0 - 30
LFB	EPTC	0.967	LCS	P	0 - 30
LFB	Ethion	2.82	LCS	P	0 - 30
LFB	Ethoprop	0.466	LCS	P	0 - 30
LFB	Fenamiphos	3.96	LCS	P	0 - 30
LFB	Fenbuconazole	3.17	LCS	P	0 - 30
LFB	Fipronil	0.397	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	9.79	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.10	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.59	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	1.44	LCS	P	0 - 30
LFB	Fludioxonil	0.268	LCS	P	0 - 30
LFB	Flumioxazin	0.990	LCS	P	0 - 30
LFB	Flutolanil	1.88	LCS	P	0 - 30
LFB	Fluxapyroxad	1.08	LCS	P	0 - 30
LFB	Fonofos	2.12	LCS	P	0 - 30
LFB	Hexazinone	4.10	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P402306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Imazalil	3.09	LCS	P	0 - 30
LFB	Iprodione	6.70	LCS	P	0 - 30
LFB	Malathion	2.52	LCS	P	0 - 30
LFB	Metalaxyl	3.05	LCS	P	0 - 30
LFB	Metolachlor	0.882	LCS	P	0 - 30
LFB	Metribuzin	2.20	LCS	P	0 - 30
LFB	Mevinphos	10.8	LCS	P	0 - 30
LFB	Molinate	6.59	LCS	P	0 - 30
LFB	Myclobutanil	3.69	LCS	P	0 - 30
LFB	Naled	1.89	LCS	P	0 - 30
LFB	Norflurazon	1.47	LCS	P	0 - 30
LFB	Oxadiazon	2.36	LCS	P	0 - 30
LFB	Oxyfluorfen	4.78	LCS	P	0 - 30
LFB	Parathion Ethyl	5.83	LCS	P	0 - 30
LFB	Parathion Methyl	2.11	LCS	P	0 - 30
LFB	Pendimethalin	2.38	LCS	P	0 - 30
LFB	Phorate	8.68	LCS	P	0 - 30
LFB	Prodiamine	11.9	LCS	P	0 - 30
LFB	Prometon	4.21	LCS	P	0 - 30
LFB	Prometryn	0.268	LCS	P	0 - 30
LFB	Pronamide	2.08	LCS	P	0 - 30
LFB	Propiconazole	3.33	LCS	P	0 - 30
LFB	Pyriproxyfen	2.91	LCS	P	0 - 30
LFB	Simazine	4.94	LCS	P	0 - 30
LFB	Sulfentrazone	2.89	LCS	P	0 - 30
LFB	Tebuconazole	0.883	LCS	P	0 - 30
LFB	Terbufos	1.84	LCS	P	0 - 30
LFB	Terbuthylazine	7.07	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P402487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268653	Aldrin	3.42	Spike	P	0 - 30
2268653	Alpha-BHC	1.24	Spike	P	0 - 30
2268653	Alpha-Chlordane	4.43	Spike	P	0 - 30
2268653	Beta-BHC	0.994	Spike	P	0 - 30
2268653	Beta-Cyfluthrin	12.1	Spike	P	0 - 30
2268653	Bifenthrin	8.05	Spike	P	0 - 30
2268653	Chlorothalonil	1.82	Spike	P	0 - 50
2268653	Cis-Nonachlor	11.5	Spike	P	0 - 30
2268653	Cypermethrin	9.60	Spike	P	0 - 30
2268653	Dacthal	2.18	Spike	P	0 - 30
2268653	DDD-p,p'	8.11	Spike	P	0 - 30
2268653	DDE-p,p'	3.63	Spike	P	0 - 30
2268653	DDT-p,p'	5.43	Spike	P	0 - 30
2268653	Delta-BHC	0.994	Spike	P	0 - 30
2268653	Deltamethrin	15.6	Spike	P	0 - 30
2268653	Dichlobenil	8.13	Spike	P	0 - 30
2268653	Dicofol	4.09	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P402487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268653	Dieldrin	13.6	Spike	P	0 - 30
2268653	Endosulfan I	3.42	Spike	P	0 - 30
2268653	Endosulfan II	9.82	Spike	P	0 - 30
2268653	Endosulfan Sulfate	10.6	Spike	P	0 - 30
2268653	Endrin	62.7	Spike	F	0 - 30
2268653	Endrin Aldehyde	35.8	Spike	F	0 - 30
2268653	Endrin Ketone	9.51	Spike	P	0 - 30
2268653	Esfenvalerate	7.72	Spike	P	0 - 30
2268653	Ethalfluralin	3.28	Spike	P	0 - 30
2268653	Fenpropathrin	6.54	Spike	P	0 - 30
2268653	Gamma-BHC	0.714	Spike	P	0 - 30
2268653	Gamma-Chlordane	5.37	Spike	P	0 - 30
2268653	Heptachlor	5.60	Spike	P	0 - 30
2268653	Heptachlor Epoxide	5.73	Spike	P	0 - 30
2268653	Hexachlorobenzene	2.68	Spike	P	0 - 30
2268653	Kepone	16.9	Spike	P	0 - 30
2268653	Lambda-Cyhalothrin	6.80	Spike	P	0 - 30
2268653	Methoxychlor	5.73	Spike	P	0 - 30
2268653	MGK-264	4.46	Spike	P	0 - 30
2268653	Mirex	2.30	Spike	P	0 - 30
2268653	Permethrin	3.84	Spike	P	0 - 30
2268653	Phenothrin	18.9	Spike	P	0 - 30
2268653	Piperonyl Butoxide	105	Spike	F	0 - 30
2268653	Prallethrin	10.1	Spike	P	0 - 30
2268653	Tau-Fluvalinate	8.09	Spike	P	0 - 30
2268653	Tetramethrin	14.7	Spike	P	0 - 30
2268653	Trans-Nonachlor	1.81	Spike	P	0 - 30
2268653	Triclosan Methyl	4.09	Spike	P	0 - 30
2268653	Trifluralin	1.03	Spike	P	0 - 30
LFB	Aldrin	1.83	LCS	P	0 - 30
LFB	Alpha-BHC	3.33	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.51	LCS	P	0 - 30
LFB	Beta-BHC	7.24	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	2.47	LCS	P	0 - 30
LFB	Bifenthrin	2.90	LCS	P	0 - 30
LFB	Chlorothalonil	0.175	LCS	P	0 - 50
LFB	Cis-Nonachlor	2.81	LCS	P	0 - 30
LFB	Cypermethrin	0.217	LCS	P	0 - 30
LFB	Dacthal	4.11	LCS	P	0 - 30
LFB	DDD-p,p'	0.299	LCS	P	0 - 30
LFB	DDE-p,p'	3.11	LCS	P	0 - 30
LFB	DDT-p,p'	2.01	LCS	P	0 - 30
LFB	Delta-BHC	3.48	LCS	P	0 - 30
LFB	Deltamethrin	4.04	LCS	P	0 - 30
LFB	Dichlobenil	2.90	LCS	P	0 - 30
LFB	Dicofol	1.59	LCS	P	0 - 30
LFB	Dieldrin	2.41	LCS	P	0 - 30
LFB	Endosulfan I	3.49	LCS	P	0 - 30
LFB	Endosulfan II	0.245	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.64	LCS	P	0 - 30
LFB	Endrin	0.00786	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P402487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	0.207	LCS	P	0 - 30
LFB	Endrin Ketone	0.0533	LCS	P	0 - 30
LFB	Esfenvalerate	3.42	LCS	P	0 - 30
LFB	Ethalfluralin	5.33	LCS	P	0 - 30
LFB	Fenpropathrin	0.282	LCS	P	0 - 30
LFB	Gamma-BHC	3.06	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.95	LCS	P	0 - 30
LFB	Heptachlor	1.08	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.91	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.57	LCS	P	0 - 30
LFB	Kepone	9.58	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	12.2	LCS	P	0 - 30
LFB	Methoxychlor	0.285	LCS	P	0 - 30
LFB	MGK-264	1.78	LCS	P	0 - 30
LFB	Mirex	2.30	LCS	P	0 - 30
LFB	Permethrin	0.988	LCS	P	0 - 30
LFB	Phenothrin	25.7	LCS	P	0 - 30
LFB	Prallethrin	2.65	LCS	P	0 - 30
LFB	Tau-Fluvalinate	3.78	LCS	P	0 - 30
LFB	Tetramethrin	13.8	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.475	LCS	P	0 - 30
LFB	Triclosan Methyl	3.88	LCS	P	0 - 30
LFB	Trifluralin	3.74	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P402487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268402	Chlordane	1.19	Spike	P	0 - 30
2268402	Toxaphene	6.49	Spike	P	0 - 30
LFB	Chlordane	12.1	LCS	P	0 - 30
LFB	Toxaphene	2.78	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2267464	3-Hydroxycarbofuran	23.0	Spike	P	0 - 30
2267464	Aldicarb	0.979	Spike	P	0 - 30
2267464	Aldicarb Sulfone	5.32	Spike	P	0 - 30
2267464	Aldicarb Sulfoxide	15.0	Spike	P	0 - 30
2267464	Carbaryl	0.624	Spike	P	0 - 30
2267464	Carbofuran	2.11	Spike	P	0 - 30
2267464	Methiocarb	1.55	Spike	P	0 - 30
2267464	Methomyl	5.72	Spike	P	0 - 30
2267464	Oxamyl	6.86	Spike	P	0 - 30
2267464	Propoxur	1.53	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P402297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268337	Acesulfame K	7.71	Spike	P	0 - 30
2268337	AMPA	1.94	Spike	P	0 - 30
2268337	Endothall	1.56	Spike	P	0 - 30
2268337	Glufosinate	2.85	Spike	P	0 - 30
2268337	Glyphosate	5.95	Spike	P	0 - 30
2268337	Sucralose	0.147	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402303

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268133	2,4-D	8.89	Spike	P	0 - 30
2268133	2,4,5-T	7.50	Spike	P	0 - 30
2268133	Acetaminophen	7.25	Spike	P	0 - 30
2268133	Acetamiprid	17.8	Spike	P	0 - 30
2268133	Afidopyropen	13.9	Spike	P	0 - 30
2268133	Bentazon	3.76	Spike	P	0 - 30
2268133	Benzovindiflupyr	0.421	Spike	P	0 - 30
2268133	Carbamazepine	2.79	Spike	P	0 - 30
2268133	Clothianidin	5.57	Spike	P	0 - 30
2268133	Dinotefuran	4.03	Spike	P	0 - 30
2268133	Diuron	4.75	Spike	P	0 - 30
2268133	Fenuron	7.02	Spike	P	0 - 30
2268133	Fluridone	7.75	Spike	P	0 - 30
2268133	Hydrocodone	4.39	Spike	P	0 - 30
2268133	Ibuprofen	5.73	Spike	P	0 - 30
2268133	Imazapyr	4.86	Spike	P	0 - 30
2268133	Imidacloprid	1.64	Spike	P	0 - 30
2268133	Linuron	5.91	Spike	P	0 - 30
2268133	Mandestrobin	5.57	Spike	P	0 - 30
2268133	MCPP	6.04	Spike	P	0 - 30
2268133	Naproxen	1.76	Spike	P	0 - 30
2268133	Primidone	4.37	Spike	P	0 - 30
2268133	Pyraclostrobin	1.48	Spike	P	0 - 30
2268133	Thiamethoxam	4.70	Spike	P	0 - 30
2268133	Tolfenpyrad	4.62	Spike	P	0 - 30
2268133	Triclopyr	4.93	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Surrogates

Lab Sample ID: 2268651
Field Sample ID: G2CE0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	66.7	P	30 - 160

Lab Sample ID: 2268652
Field Sample ID: G2CE0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.6	P	30 - 160
EPA 8321B	Diuron-d6	77.1	P	30 - 160
EPA 8321B	Endothall-d6	87.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.9	P	30 - 160
EPA 8321B	Primidone-d5	88.9	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2268653
Field Sample ID: G2CE0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	36.7	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	34.5	P	30 - 110
EPA 8276	Decachlorobiphenyl	64.2	P	29 - 92.0
EPA 8276	Decachlorobiphenyl	32.0	P	29 - 92.0
EPA 8276	PCNB	72.3	P	43 - 134
EPA 8276	PCNB	39.1	F	43 - 134

Lab Sample ID: 2268654
Field Sample ID: G2CE0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	67.0	P	20 - 200
EPA 8270E	Simazine-d10	101	P	73 - 135
EPA 8270E	Terbufos-d10	93.4	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A107195
Included Lab Sample IDs: 2268651

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	104	104	P/P	60 - 150
Aldicarb	104	103	P/P	60 - 150
Aldicarb Sulfone	103	103	P/P	50 - 150
Aldicarb Sulfoxide	102	105	P/P	50 - 150
Carbaryl	105	106	P/P	60 - 150
Carbofuran	101	104	P/P	50 - 150
Methiocarb	103	97.8	P/P	50 - 150
Methomyl	104	106	P/P	50 - 150
Oxamyl	104	102	P/P	50 - 150
Propoxur	106	105	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A107239
Included Lab Sample IDs: 2268652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.0	87.5	P/P	60 - 160
Glufosinate	88.1	91.9	P/P	60 - 160
Glyphosate	97.3	104	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A107242
Included Lab Sample IDs: 2268652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	123	129	P/P	60 - 160
Endothall	98.3	83.5	P/P	60 - 160
Sucralose	108	96.9	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A107269
Included Lab Sample IDs: 2268652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.1	97.8	P/P	50 - 150
2,4,5-T	96.9	91.6	P/P	50 - 150
Acetaminophen	97.3	90.4	P/P	60 - 160
Acetamiprid	98.5	96.1	P/P	50 - 150
Afidopyropen	92.7	85.6	P/P	50 - 150
Bentazon	109	106	P/P	50 - 160
Benzovindiflupyr	95.5	96.3	P/P	50 - 150
Carbamazepine	101	102	P/P	60 - 150
Clothianidin	101	93.3	P/P	60 - 150
Dinotefuran	98.2	95.1	P/P	50 - 150
Diuron	109	106	P/P	60 - 160
Fenuron	96.8	92.3	P/P	60 - 150
Fluridone	103	92.0	P/P	60 - 160
Hydrocodone	106	103	P/P	60 - 150
Ibuprofen	91.7	91.4	P/P	50 - 160
Imazapyr	94.3	92.3	P/P	50 - 150
Imidacloprid	94.6	93.5	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A107269
Included Lab Sample IDs: 2268652

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	95.4	91.4	P/P	60 - 150
Mandestrobin	95.0	94.6	P/P	50 - 150
MCPP	99.8	92.4	P/P	50 - 150
Naproxen	85.0	92.0	P/P	50 - 160
Primidone	104	99.3	P/P	60 - 150
Pyraclostrobin	96.5	97.0	P/P	60 - 150
Thiamethoxam	102	99.0	P/P	50 - 150
Tolfenpyrad	93.3	93.8	P/P	60 - 150
Triclopyr	94.6	91.5	P/P	50 - 150

Reference Method: EPA 8276
Run ID: A107349
Included Lab Sample IDs: 2268653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.7		P	80 - 120
Toxaphene	105		P	80 - 120

Reference Method: EPA 8270E
Run ID: A107387
Included Lab Sample IDs: 2268654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	94.5		P	80 - 120
Atrazine	104		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	87.2		P	80 - 120
Azoxystrobin	92.5		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	99.9		P	80 - 120
Caffeine	96.0		P	80 - 120
Carbophenothion	100		P	80 - 120
Carfentrazone Ethyl	101		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	108		P	80 - 120
Cyanazine	102		P	80 - 120
Demeton	49.6*		F	80 - 120
Diazinon	103		P	80 - 120
Difenoconazole	89.5		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	98.2		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	100		P	80 - 120
Ethion	97.1		P	80 - 120
Ethoprop	99.6		P	80 - 120
Fenamiphos	95.7		P	80 - 120
Fenbuconazole	93.0		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	110		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A107387
Included Lab Sample IDs: 2268654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	106		P	80 - 120
Fluazifop-P-butyl	113		P	80 - 120
Fludioxonil	101		P	80 - 120
Flumioxazin	92.9		P	80 - 120
Flutolanil	102		P	80 - 120
Fluxapyroxad	102		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	110		P	80 - 120
Imazalil	92.6		P	80 - 120
Iprodione	107		P	80 - 120
Malathion	95.0		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	91.1		P	80 - 120
Myclobutanil	97.8		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	90.2		P	80 - 120
Oxadiazon	104		P	80 - 120
Oxyfluorfen	92.3		P	80 - 120
Parathion Ethyl	98.6		P	80 - 120
Parathion Methyl	100		P	80 - 120
Pendimethalin	98.2		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	99.4		P	80 - 120
Prometryn	98.6		P	80 - 120
Pronamide	94.5		P	80 - 120
Propiconazole	101		P	80 - 120
Pyriproxyfen	100		P	80 - 120
Simazine	108		P	80 - 120
Sulfentrazone	104		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	103		P	80 - 120
Terbuthylazine	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A107432
Included Lab Sample IDs: 2268653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.6		P	80 - 120
Alpha-BHC	96.4		P	80 - 120
Alpha-Chlordane	98.6		P	80 - 120
Beta-BHC	105		P	80 - 120
Beta-Cyfluthrin	96.9		P	80 - 120
Bifenthrin	99.5		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cis-Nonachlor	98.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A107432
Included Lab Sample IDs: 2268653

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cypermethrin	100		P	80 - 120
Dacthal	100		P	80 - 120
DDD-p,p'	96.6		P	80 - 120
DDE-p,p'	99.8		P	80 - 120
DDT-p,p'	96.3		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	92.7		P	80 - 120
Dichlobenil	99.9		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	97.0		P	80 - 120
Endosulfan I	97.5		P	80 - 120
Endosulfan II	99.4		P	80 - 120
Endosulfan Sulfate	98.6		P	80 - 120
Endrin	96.1		P	80 - 120
Endrin Aldehyde	97.0		P	80 - 120
Endrin Ketone	97.1		P	80 - 120
Esfenvalerate	96.6		P	80 - 120
Ethalfluralin	94.8		P	80 - 120
Fenpropathrin	99.1		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	95.5		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	99.9		P	80 - 120
Kepone	89.7		P	80 - 120
Lambda-Cyhalothrin	94.9		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	94.7		P	80 - 120
Permethrin	98.0		P	80 - 120
Phenothrin	121*		F	80 - 120
Piperonyl Butoxide	95.0		P	80 - 120
Prallethrin	100		P	80 - 120
Tau-Fluvalinate	96.7		P	80 - 120
Tetramethrin	99.7		P	80 - 120
Trans-Nonachlor	99.5		P	80 - 120
Triclosan Methyl	99.9		P	80 - 120
Trifluralin	96.6		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Acetochlor	100	102	92.2	102	1.12		9.98
	Alachlor	93.0	94.1	83.8	96.5	1.19		14.0
	Aldrin	60.6	61.7	64.9	62.8	1.83		3.42
	Alpha-BHC	96.4	99.6	91.3	90.2	3.33		1.24
	Alpha-Chlordane	91.9	98.0	91.0	87.1	6.51		4.43
	Ametryn	102	102	75.4	87.2	0.471		10.6
	Atrazine	95.2	96.2			1.03		7.25
	Atrazine Desethyl	89.2	93.8	54.8	64.8	4.98		16.8
	Azinphos Methyl	131	129	120	142	1.84		16.8
	Azoxystrobin	98.2	106	108	98.8	7.60		7.70
	Beta-BHC	128	138	109	110	7.24		0.994
	Beta-Cyfluthrin	78.3	76.4	135	120	2.47		12.1
	Bifenthrin	66.4	68.3	99.7	92.0	2.90		8.05
	Bromacil	87.0	90.0	84.2	95.7	3.45		11.9
	Butylate	42.9	44.3	45.5	38.6	3.22		16.2
	Caffeine	70.3	71.4			1.57		0.0433
	Carbophenothion	105	103	91.0	101	1.86		10.3
	Carfentrazone Ethyl	117	117	106	89.0	0.223		17.9
	Chlorothalonil	82.6	82.5	130	132	0.175		1.82
	Chlorpyrifos Ethyl	88.8	87.5	82.5	74.7	1.54		9.91
	Chlorpyrifos Methyl	96.3	93.9	90.1	101	2.43		11.6
	Cis-Nonachlor	77.5	75.4	83.2	74.2	2.81		11.5
	Cyanazine	135	141	138	162	4.14		15.5
	Cypermethrin	77.7	77.6	120	109	0.217		9.60
	Dacthal	101	105	91.3	89.3	4.11		2.18
	DDD-p,p'	83.7	83.5	91.5	84.4	0.299		8.11
	DDE-p,p'	93.1	96.1	84.3	81.2	3.11		3.63
	DDT-p,p'	87.6	89.3	80.6	76.3	2.01		5.43
	Delta-BHC	134	138	106	105	3.48		0.994
	Deltamethrin	94.7	91.0	149	128	4.04		15.6
	Demeton	48.5	46.2	113	115	4.83		2.03
	Diazinon	97.6	95.9	96.4	115	1.84		17.7
	Dichlobenil	70.7	72.8	70.6	76.6	2.90		8.13
	Dicofol	78.5	79.7	88.5	85.0	1.59		4.09
	Dieldrin	75.4	73.6	95.1	82.9	2.41		13.6
	Difenoconazole	183	184	177	215	0.655		19.7
	Dimethenamid	79.7	80.8	69.9	83.0	1.46		17.2
	Disulfoton	91.1	94.0	89.8	99.4	3.09		10.1
	Dithiopyr	90.6	94.2	78.7	83.8	3.92		6.34
	Endosulfan I	90.4	93.6	84.9	82.1	3.49		3.42
	Endosulfan II	76.8	77.0	91.9	83.3	0.245		9.82
	Endosulfan Sulfate	88.1	90.5	90.7	81.5	2.64		10.6
	Endrin	14.9	14.9	67.1	35.1	0.0078		62.7
	Endrin Aldehyde	41.0	41.1	51.4	35.8	0.207		35.8
	Endrin Ketone	149	149	106	117	0.0533		9.51
	EPTC	44.9	45.4	47.7	36.9	0.967		25.6
	Esfenvalerate	78.9	76.3	132	122	3.42		7.72
	Ethalfluralin	63.3	60.0	81.8	79.2	5.33		3.28
	Ethion	76.9	74.7	57.3	82.5	2.82		36.1
	Ethoprop	87.4	87.0	110	113	0.466		3.09
	Fenamiphos	94.1	97.9	87.5	76.4	3.96		13.5
	Fenbuconazole	115	119	121	128	3.17		6.22
	Fenpropathrin	44.3	44.2	86.9	81.4	0.282		6.54
	Fipronil	106	107	104	111	0.397		6.86

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Fipronil Desulfinyl	106	117	97.4	116	9.79		16.2
	Fipronil Sulfide	87.8	90.6	89.5	101	3.10		10.2
	Fipronil Sulfone	81.2	78.3	71.6	87.0	3.59		14.8
	Fluazifop-P-butyl	105	104	96.7	114	1.44		16.7
	Fludioxonil	121	121	104	125	0.268		18.5
	Flumioxazin	189	191	182	235	0.990		25.0
	Flutolanil	93.1	91.4	74.7	93.1	1.88		21.9
	Fluxapyroxad	94.1	95.2	80.6	95.4	1.08		16.8
	Fonofos	86.6	84.8	91.3	105	2.12		13.7
	Gamma-BHC	106	109	97.4	98.1	3.06		0.714
	Gamma-Chlordane	86.6	88.4	86.0	81.5	1.95		5.37
	Heptachlor	72.1	72.9	76.9	72.7	1.08		5.60
	Heptachlor Epoxide	89.6	92.2	86.0	81.2	2.91		5.73
	Hexachlorobenzene	87.3	85.9	78.3	76.2	1.57		2.68
	Hexazinone	96.1	100	92.0	106	4.10		8.66
	Imazalil	93.7	96.7	77.7	84.3	3.09		6.59
	Iprodione	109	102	110	123	6.70		11.7
	Kepone	96.3	87.5	122	103	9.58		16.9
	Lambda-Cyhalothrin	77.7	68.7	114	106	12.2		6.80
	Malathion	93.3	91.0	88.2	99.8	2.52		12.4
	Metalaxyl	92.8	95.7	84.0	96.8	3.05		14.1
	Methoxychlor	83.9	83.6	89.3	84.3	0.285		5.73
	Metolachlor	89.6	90.4	82.4	96.5	0.882		14.4
	Metribuzin	90.6	92.6	102	105	2.20		3.35
	Mevinphos	75.7	84.4	105	111	10.8		5.06
	MGK-264	96.8	98.5	101	96.4	1.78		4.46
	Mirex	63.4	62.0	72.3	70.6	2.30		2.30
	Molinate	46.8	50.0	57.7	56.2	6.59		2.53
	Myclobutanil	92.2	95.7	82.5	98.4	3.69		15.9
	Naled	47.7	46.8	49.1	53.8	1.89		9.03
	Norflurazon	110	112	97.7	112	1.47		13.3
	Oxadiazon	82.0	83.9	76.2	85.7	2.36		11.7
	Oxyfluorfen	102	97.1	104	123	4.78		16.4
	Parathion Ethyl	87.9	93.1	90.9	105	5.83		14.4
	Parathion Methyl	112	110	117	125	2.11		6.41
	Pendimethalin	65.2	66.7	81.9	87.8	2.38		6.97
	Permethrin	78.7	79.5	118	114	0.988		3.84
	Phenothrin	68.3	52.8	91.5	111	25.7		18.9
	Phorate	74.0	67.8	87.3	84.8	8.68		2.96
	Piperonyl Butoxide	0.462	0.238	79.9	15.8			105
	Prallethrin	49.7	48.4	99.6	90.0	2.65		10.1
	Prodiamine	28.8	25.6	47.3	52.3	11.9		10.1
	Prometon	87.6	91.4	82.8	108	4.21		26.5
	Prometryn	95.4	95.7	67.9	72.5	0.268		6.51
	Pronamide	93.4	91.5	81.9	95.0	2.08		14.9
	Propiconazole	94.6	97.8	82.7	86.5	3.33		2.96
	Pyriproxyfen	89.2	91.8	69.7	83.7	2.91		18.2
	Simazine	98.1	103	101	110	4.94		9.23
	Sulfentrazone	100	97.6	85.0	102	2.89		14.0
	Tau-Fluvalinate	67.7	70.3	114	105	3.78		8.09
	Tebuconazole	77.6	76.9	50.0	73.7	0.883		28.7
	Terbufos	93.7	95.4	109	119	1.84		8.60
	Terbuthylazine	83.0	89.0	87.1	99.2	7.07		13.0
	Tetramethrin	26.3	22.9	103	89.0	13.8		14.7

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Trans-Nonachlor	88.1	87.7	81.1	79.7	0.475		1.81
	Triclosan Methyl	99.0	95.2	83.3	80.0	3.88		4.09
	Trifluralin	82.0	85.2	79.0	78.2	3.74		1.03
EPA 8276	Chlordane	96.1	108	91.9	90.8	12.1		1.19
	Toxaphene	97.9	95.2	91.9	86.2	2.78		6.49
EPA 8321B	2,4-D	135		104	114			8.89
	2,4,5-T	111		107	99.4			7.50
	3-Hydroxycarbofuran	87.4		72.2	90.9			23.0
	Acesulfame K	106		123	133			7.71
	Acetaminophen	100		82.1	88.2			7.25
	Acetamiprid	93.7		68.5	81.9			17.8
	Afidopyropen	75.0		55.2	63.4			13.9
	Aldicarb	62.8		78.8	79.6			0.979
	Aldicarb Sulfone	90.8		110	104			5.32
	Aldicarb Sulfoxide	107		54.7	47.0			15.0
	AMPA	88.6		76.0	77.6			1.94
	Bentazon	113		94.7	91.2			3.76
	Benzovindiflupyr	94.7		87.0	86.6			0.421
	Carbamazepine	103		91.5	89.0			2.79
	Carbaryl	80.5		76.8	76.3			0.624
	Carbofuran	81.6		78.1	79.8			2.11
	Clothianidin	107		93.2	98.6			5.57
	Dinotefuran	104		91.2	94.9			4.03
	Diuron	94.0		84.9	81.0			4.75
	Endothall	87.2		105	106			1.56
	Fenuron	104		86.6	92.9			7.02
	Fluridone	95.3		91.7	84.9			7.75
	Glufosinate	92.7		80.0	77.7			2.85
	Glyphosate	98.0		82.0	77.0			5.95
	Hydrocodone	98.6		89.8	86.0			4.39
	Ibuprofen	84.8		82.1	77.5			5.73
	Imazapyr	108		99.5	104			4.86
	Imidacloprid	100		97.8	99.4			1.64
	Linuron	83.4		80.5	75.9			5.91
	Mandestrobin	100		82.5	87.2			5.57
	MCPP	117		117	110			6.04
	Methiocarb	73.0		74.9	73.7			1.55
	Methomyl	87.6		85.7	81.0			5.72
	Naproxen	89.9		85.6	84.1			1.76
	Oxamyl	87.6		95.2	88.9			6.86
	Primidone	103		93.5	89.5			4.37
	Propoxur	82.2		84.0	82.7			1.53
	Pyraclostrobin	92.6		82.3	83.6			1.48
	Sucralose	99.0		102	102			0.147
	Thiamethoxam	105		95.0	99.6			4.70
	Tolfenpyrad	60.2		57.3	54.7			4.62
	Triclopyr	114		106	101			4.93

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2268653
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2268654

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2268653
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2268651
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2268652

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	08/11/2021	08/13/2021 08:00	Rasheda Ghaffari	08/17/2021 22:33	Michael Poppell	2268654
	08/11/2021	08/16/2021 08:30	Rasheda Ghaffari	08/18/2021 22:20	Arthur Maknenko	2268653
EPA 8276	08/11/2021	08/16/2021 08:30	Rasheda Ghaffari	08/19/2021 08:40	Michael Poppell	2268653
EPA 8321B	08/11/2021	08/11/2021 13:00	Hoor Shaik	08/12/2021 05:37	Juyoung Kim	2268651
	08/11/2021	08/13/2021 09:00	Hoor Shaik	08/14/2021 12:33	Juyoung Kim	2268652
	08/11/2021	08/13/2021 09:00	Juyoung Kim	08/13/2021 11:13	Juyoung Kim	2268652
	08/11/2021	08/13/2021 09:00	Juyoung Kim	08/13/2021 12:27	Pramila Ghimire	2268652